IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	
Max Carl Knees et al.	Group Art Unit: 2154
Application No.: 10/716,605	Examiner: Keefer Michael E.
Filed: November 20, 2003	Appeal No.: _____
For: NETWORK DISCOVERY	Confirmation No.: 7176

APPEAL BRIEF

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is from the decision of the Primary Examiner dated December 28, 2007 finally rejecting claims 1-17, which are reproduced as the Claims Appendix of this brief.

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I. Real Party in Interest

Hewlett-Packard Company. Hewlett-Packard Company is the real party in interest, and is the assignee of Application No. 10/716,605.

II. Related Appeals and Interferences

The Appellant legal representative, or assignee, does not know of any other appeal or interferences which will affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

A. There are 17 total claims currently pending in the application.

B. Current Status of Claims

1. Claims cancelled: None
2. Claims withdrawn from consideration: None
3. Claims pending: 1-17
4. Claims allowed: None
5. Claims rejected: 1-17
6. Claims on Appeal: 1-17

IV. Status of Amendments

No amendments were filed subsequent to the final Office Action dated August 13, 2007.

V. Summary Claimed Subject Matter

The instant application is directed to exemplary solutions for discovering a network. These solutions include dividing a network into zones of network devices (pgphs [0008-0012]), identifying devices in the zone that have simple network management protocol access (pgphs [0008 and 0016]), and collecting data from the identified devices (pgph [0008 and 0017]). The devices are identified through a set of queries, which search for predetermined values in any of the devices in the zone

(pgph [0011]). The collected data is stitched into a topology of the network and it is determined whether all zones in the network have been processed (pgph [0012]).

The table, which follows, maps Appellants' independent claims to those portions of the disclosure that support the recited features.

Claim	Element	Support
1	A method for discovering a network comprising network devices, the method comprising:	pgph [0008]
	dividing the network into zones of network devices;	pgph [0008-0012]; Fig. 1, element 100
	in a first zone of the network, identifying devices in the first zone that have SNMP (Simple Network Management Protocol) access through a set of queries;	pgphs [0008] and [0016]; Fig. 1, element 102
	collecting data from the identified devices; and	pgphs [0008] and [0017]; Fig. 1, element 104
	stitching the collected data into a topology of the network	pgphs [0008] and [0012]; Fig. 1, element 106
8	A system for discovering a network organized into zones of network devices, comprising:	Fig. 2
	means for identifying devices in a zone of the network that have SNMP (Simple Network Management Protocol) access through a set of queries, collecting data from those devices in the zone identified as having SNMP access, and stitching the collected data into a topology of the network; and	pgphs [0008], [0012], [0016], [0017]; means includes device configured through programming to execute multiple modules or processes such as 216, 218, 220, 222, 232, 234, 238, 240, and 242 shown in Fig. 2

Claim	Element	Support
	means for transferring data to and from the means for identifying, collecting and stitching.	pgph [0025]; Fig. 4, element 404; means includes a graphical user interface or other data transfer mechanism, interface
11	A machine readable medium comprising a computer program for causing a computer to execute a method of discovering a network, the method comprising:	pgph [0023]
	dividing the network into zones of network devices;	pgph [0008-0012]; Fig. 1, element 100
	in a first zone of the network, identifying devices in the zone that have SNMP (Simple Network Management Protocol) access;	pgphs [0008] and [0016]; Fig. 1, element 102
	collecting data from the identified devices; and	pgphs [0008] and [0017]; Fig. 1, element 104
	stitching the collected data into a topology of the network.	pgphs [0008] and [0012]; Fig. 1, element 106

VI. Grounds of Rejection to be Reviewed on Appeal

A. Claims 1-17 are rejected under 35 U.S.C. §102(b) as anticipated by *Raab et al* (U.S. Patent No. 5,850,397).

B. Claims 1, 8, and 11 are rejected under 35 U.S.C. §102(e) as anticipated by *Goringe et al* (U.S. Patent Publication No. 2003/0043820).

VII. Argument

A. *Raab* fails to establish a *prima facie* case of anticipation with respect to claims 1, 8, and 11

In numbered paragraph 7 on page 5 of the Office Action, claims 1-17 stand rejected under 35 U.S.C. §102(b) as anticipated by *Raab et al* (U.S. Patent No. 5,850,397). Appellant respectfully traverses this rejection.

As shown in exemplary Figures 1-4, Appellant's disclosed embodiment relates to solutions for discovering a network. These solutions includes dividing a network into zones of network devices, identifying devices in the zone that have simple network management protocol access, and collecting data from the identified devices. The devices are identified through a set of queries, which search for predetermined values in any of the devices in the zone. The collected data is stitched into a topology of the network and it is determined whether all zones in the network have been processed.

Appellant's claims broadly encompass the aforementioned embodiment by reciting a system and method that comprises, in part, identifying devices in a zone of the network that have SNMP access through a set of queries.

Raab fails to disclose every element recited in Appellant's claims, and thus fail to establish a *prima facie* case of anticipation. *Raab* teaches a method that

determines the topology of a mixed media network. This method divides a network into communities of devices called spheres (col. 3, lines 16-20). In each sphere, a sphere topology agent generates and accumulates topology data for devices on the sphere using a topology mechanism that is supported by the devices within the sphere (col. 4, lines 22-25). In a global topology determination process, a global topology agent (GPA) queries a dispatch (device) to determine a media type of the network to which the dispatch belongs. The (GPA) sends a seed to the media-specific sphere agent associated with the network (col. 11, lines 10-18). The global topology agent collects the topology data for each sphere from the various sphere agents and assembles the data to determine the global topology of the mixed media network (col. 12, lines 5-35).

Raab discloses that the global topology agent sends a seed to the appropriate sphere agent based on the media type of the network. In numbered paragraph 9 on page 6 of the final Office Action, the Examiner alleges that because *Raab* discloses determining the media type of the network based on a query, it is in effect querying to determine if the sphere is an SNMP enabled network. Appellant disagrees with the Examiner, because *Raab* does not disclose a technique of identifying devices in a first zone that have SNMP access through a set of queries as recited in the claims.

Rather, *Raab* discloses a concept in which each sphere agent makes topology data available in an SNMP format. That is, the sphere agents are known or established prior to the point at which the media type of the network is determined. One of ordinary skill would recognize that there is no need to identify which devices in a network are SNMP enabled if these devices are known or established seemingly when the network is initially configured. Thus, at best *Raab* discloses that the query

is performed to determine a media type and select a sphere agent based on the media type. The fact that the sphere agent can communicate data in an SNMP format is inconsequential to whether the sphere agent is selected, as the sphere agent is identified based on the media type of the associated sphere. For these reasons, Appellant respectfully requests that this rejection to claims 1 and 8 not be sustained.

B. Claims 3 and 13 are distinguishable over *Raab*

In the paragraph bridging pages 2 and 3 of the final Office Action, the Examiner alleges that *Raab* discloses dispatching identified devices in the first zone to agents, and collecting the data from the identified devices via the agents using SNMP access as recited in the above-noted claims.

Appellant traverses this rejection because *Raab* does not disclose dispatching identified devices to agents. In the rejection of base claims 1 and 11, the Examiner alleges that the sphere agent described in *Raab* corresponds to the identified devices recited in Appellant's claim. *Raab* discloses selecting a sphere agent based on its media type (col. 11, lines 10-17). The sphere agent, in turn, sends topology information to the global topology agent (col. 10, lines 65-67; col. 11, lines 19-20). Based on the Examiner's reasoning, the sphere agent is dispatched to another agent device, and the global topology agent collects data from the sphere agent through another agent. However, this line of reasoning is inconsistent with the disclosure of *Raab*, as this reference discloses that the sphere agent sends topology information to the global topology agent. There is no teaching or suggestion that the sphere agent communicates topology information to the global topology agent via any other

devices. For these reasons, the rejection of claims 3 and 13 should not be sustained.

C. *Raab* fails to anticipate claims 5 and 15

In comments bridging pages 3 and 4, the Examiner alleges that *Raab* discloses every feature of the above-noted claims. Appellant respectfully traverses this rejection, however, because *Raab* fails to disclose or suggest at least invoking a third module as recited in claims 5 and 15. In fact, the Examiner fails to cite Appellant's invoking a third module feature in the rejection, and consequently fails to map *Raab* to this feature. For at least this reason, the rejection is improper and should not be sustained.

D. Claims 7 and 17 are not anticipated by *Raab*

Claims 7 and 17 recite, among other features, invoking a seventh module, which clears the dispatch and returns portions of the third database and refreshes topology and layer databases and signals that topological analysis with respect to the zone has been completed.

Contrary to the Examiner's assertions, *Raab* fails to implicitly or explicitly disclose the aforementioned feature of claims 7 and 17. In the description provided in columns 10-12, *Raab* discusses various methods of determining topologies. Upon careful analysis, this description fails to discuss the clearing of a dispatch and return portions of a database and a refreshing of topology and layer databases and signals as recited in Appellant's claims. For this reason, the Examiner's assertions are merely speculative and conclusory as they lack support based on the description provided in *Raab*. Appellant respectfully requests, therefore, that this rejection not be sustained.

In summary, *Raab* fails to disclose or suggest every feature recited in Appellant's claims and thus fails to establish a *prima facie* case of anticipation. To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. *See* Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). For the reasons discussed in detail above, Appellant respectfully requests that the rejection of claims 1-17 not be sustained.

E. *Goringe* fails to establish a *prima facie* case of anticipation.

Goringe does not anticipate Appellant's claims because it fails to disclose or suggest at least identifying devices in a zone that have SNMP as recited therein.

Goringe discloses a system that determines a topology associated with a network. A data collection agent gathers information about the network topology by contacting a selected router in each routing region (paragraph [0029]). The algorithm adds routers to a table if the routers are configured according to a selected routing protocol (e.g., EIGRP, RIP, Open shortest path first (OSPF), and Netware Link Service Protocol) and/or otherwise contactable (paragraph [0036]). A data analyzing agent analyzes the gathered information to generate an output from which the network topology can be derived (paragraph [0023]). The data collection agent uses a router tape to identify a selected router in determining whether the routers have been contacted (paragraph [0023]). Based on a router, link, network, and/or interface list, a map or model of topology is generated.

In numbered paragraph 10 on beginning on page 6 of the final Office Action, the Examiner alleges that the determination of whether a router is SNMP enabled in the *Goringe* patent is analogous to Appellant's claimed identifying feature. However,

the Examiner fails to appreciate that the data collection agent described in the *Goringe* patent does not query border routers as recited in Appellant's claims, but rather sends a test message to the border routers and awaits a response.

As described in Appellant's disclosure, a details agent receives nodes from a Details.dispatch portion of a database and performs a set of SNMP queries for values such as sysDescr and sysObjectID, and inserts values received in response to the queries into a Details.returns portion of the database (pgph [0011]). Thus, the details agent receives values from the nodes through the queries.

In contrast, the *Goringe* patent discloses that a data collection agent contacts a border router and determines if a response was received within a predetermined time interval (see pgph [0048]). Upon careful analysis, Appellant notes that the *Goringe* patent does not appear to contemplate the data collection agent receiving information from the router, but rather is concerned with the data collection agent receiving a response from the data collection agent. Because there is no collection of data from the router as a result of this contact, it appears that in this instance the communication between the data collection agent and the router amounts to a pinging technique. As known by those of ordinary skill, pinging works by sending packets to a target host and listening on the network for replies. As a result, Appellant respectfully submits that one of ordinary skill would not reasonably interpret pinging technique used in the SNMP discovery described in the *Goringe* patent as being analogous to Appellant's claimed query. Because the *Goringe* patent fails to disclose all of Appellant's claimed features, reversal of the rejection to claims 1, 8, and 11 is respectfully requested.

VIII. Claims Appendix

See attached Claims Appendix for a copy of the claims involved in the appeal.

IX. Evidence Appendix

No evidentiary exhibits are provided with this Appeal.

X. Related Proceedings Appendix

No related proceedings are associated with this Appeal.

XI. Conclusion

Appellant has pointed to errors in the rejection of the claims. Appellant respectfully requests that the final rejection be reversed and the application be returned to the Examiner for prompt allowance.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

The Appealed Claims

1. (Previously Presented) A method for discovering a network comprising network devices, the method comprising:

dividing the network into zones of network devices;

in a first zone of the network, identifying devices in the first zone that have SNMP (Simple Network Management Protocol) access through a set of queries;

collecting data from the identified devices; and

stitching the collected data into a topology of the network.

2. (Previously Presented) The method of claim 1, comprising:

repeating the steps of identifying, collecting and stitching for each of the zones in the network.

3. (Previously Presented) The method of claim 1, comprising:

dispatching the identified devices in the first zone to agents; and

collecting the data from the identified devices via the agents using the SNMP access.

4. (Original) The method of claim 3, comprising:

caching the collected data; and

downloading the topology into a database.

5. (Previously Presented) The method of claim 1, wherein the process of identifying comprises:

a first module receiving a list of managed nodes in the network and publishing the list of managed nodes to a first file;

a second module reading the first file and inserting data from the first file into a returns portion of a first database;

invoking a third module upon each insertion of data from the first file into the returns portion of the first database, which inserts the data from the returns portion of the first database into a processing portion of the first database;

invoking a fourth module upon each insertion of data into the processing portion of the first database, the fourth module identifying nodes corresponding to the inserted data to a dispatch portion of a second database; and

a details agent obtaining the node identifications from the dispatch portion of the second database, performing queries to the nodes corresponding to the node identifications, and inserting information received in response to the queries into a returns portion of the second database.

6. (Previously Presented) The method of claim 5, wherein the process of collecting comprises:

invoking a fifth module, which accesses the returns portion of the second database, computes a list of the zones, and dispatches valid nodes in the first zone to active agents via a dispatch portion of a third database,

wherein the agents collect data from the valid nodes and returning return the collected data to a returns portion of the third database.

7. (Previously Presented) The method of claim 6, comprising:

invoking a sixth module, which causes the collected data in the returns portion of the third database to be processed into discovery topology data of the network and then downloaded; and

invoking a seventh module, which clears the dispatch and returns portions of the third database and refreshes topology and layer databases and signals that topological analysis with respect to the zone has been completed.

8. (Previously Presented) A system for discovering a network organized into zones of network devices, comprising:

means for identifying devices in a zone of the network that have SNMP (Simple Network Management Protocol) access through a set of queries, collecting data from those devices in the zone identified as having SNMP access, and stitching the collected data into a topology of the network; and

means for transferring data to and from the means for identifying, collecting and stitching.

9. (Original) The system of claim 8, wherein:

the means for transferring comprises a Graphical User Interface; and

the system comprises means for caching data.

10. (Original) The system of claim 8, wherein the means for identifying, collecting and stitching repeats the identifying, collecting and stitching for each zone in the network.

11. (Previously Presented) A machine readable medium comprising a computer program for causing a computer to execute a method of discovering a network, the method comprising:

dividing the network into zones of network devices;

in a first zone of the network, identifying devices in the zone that have SNMP (Simple Network Management Protocol) access;

collecting data from the identified devices; and

stitching the collected data into a topology of the network.

12. (Previously Presented) The medium of claim 11, wherein the computer program causes the computer to perform:

repeating the steps of identifying, collecting and stitching for each of the zones in the network.

13. (Original) The medium of claim 11, wherein the computer program causes the computer to perform:

dispatching identified devices in the zone to agents; and

collecting the data from the identified devices via the agents using the SNMP access.

14. (Original) The medium of claim 11, wherein the computer program causes the computer to perform:

caching the collected data; and

downloading the topology into a database.

15. (Original) The medium of claim 11, wherein the computer program includes first, second, third and fourth modules and a details agent, and causes the computer to perform:

the first module receiving a list of managed nodes in the network and publishing the list of managed nodes to a first file;

the second module reading the first file and inserting data from the first table file into a returns portion of a first database;

invoking the third module upon each said insertion of data from the first table file into the returns portion of the first database, which inserts the data from the returns portion of the first database into a processing portion of the first database;

invoking the fourth module upon each said insertion of data into the processing portion of the first database, the fourth module identifying nodes corresponding to the inserted data to a dispatch portion of a second database; and

the details agent obtaining node identifications from the dispatch portion of the second database, performing queries to the nodes corresponding to the node identifications, and inserting information received in response to the queries into a returns portion of the second database.

16. (Previously Presented) The medium of claim 15, wherein the computer program includes a fifth module and causes the computer to perform:

invoking the fifth module, which accesses the returns portion of the second database, computes a list of the zones, and dispatches valid nodes in the first zone to active agents via a dispatch portion of a third database,

wherein the active agents collect data from the valid nodes and return the collected data to a returns portion of the third database.

17. (Previously Presented) The medium of claim 16, wherein the computer program includes sixth and seventh modules and causes the computer to perform:

invoking the sixth module, which causes the collected data in the returns portion of the third database to be processed into discovery topology data of the network and then downloaded; and

invoking the seventh module, which clears the dispatch and returns portions of the third database and refreshes topology and layer databases and signals that topological analysis with respect to the zone has been completed.

IX. EVIDENCE APPENDIX

NONE

X. RELATED PROCEEDINGS APPENDIX

NONE